

**University of Iowa Department of Ophthalmology and Visual Sciences
at ARVO 2021**

Saturday, May 1	
3:45 PM – 4:00 PM	
Live Paper Discussion	
	Live Discussion: Retinal Organoids: Cell Diversity and New Strategies. Budd Tucker, PhD.
Monday, May 3	
10:15 AM – 11:45 AM	
Paper Session: Regulating Endothelial Cell Homeostasis	
	Local CFH synthesis protects choroidal endothelial cells from membrane attack complex formation. Kelly Mulfaul¹, Nathaniel K. Mullin¹, Joseph C. Giacalone¹, Arwin Shrestha¹, Heather T. Daggett¹, Edwin M. Stone¹, Budd A. Tucker¹, Robert F. Mullins¹
10:15 AM – 12:00 PM	
Poster Session: Drug Delivery and Gene Therapy	
	Subretinal gene replacement rescues retinal phenotype in BBS10 mouse. Arlene V. Drack^{1,3}, Angela Mahoney^{1,3}, Sajag Bhattarai^{1,3}, Sara Mayer^{1,3}, Jacintha Thomas^{1,3}, Poppy Datta^{1,3}, Ying Hsu^{1,3}, Janelle Garrison^{1,3}, Elise Heon², Charles Searby^{1,3}, Luk H. Vandenberghe^{5,4}, Seongjin Seo^{1,3}, Val Sheffield^{1,3}
10:15 AM – 12:00 PM	
Poster Session: Gene Editing and Ocular Therapies	
	Developing a CRISPR-mediated safe harbor strategy to correct patient-derived induced pluripotent stem cells. Erin R. Burnight¹, Laura R. Bohrer¹, Jessica A. Cooke¹, Dalyz Ochoa¹, Christy L. Ralston¹, Elizabeth L. Geary¹, Megan A. Luse¹, Robert F. Mullins¹, Edwin M. Stone¹, Budd A. Tucker¹
Poster Session: Drug Delivery and Gene Therapy	
	Evaluating the tropism of chimeric helper-dependent adenoviral vectors for delivery of large genes. Luke A. Wiley¹, Erin R. Burnight¹, Dalyz Ochoa¹, Malia M. Collins¹, Katayoun Varzavand¹, Edwin M. Stone¹, Robert F. Mullins¹, Budd A. Tucker¹, Ian Han¹
3:30 PM – 5:15 PM	
Poster Session: Visual Impairment – Assessment and Measurement	
	Five-Year Post-Injection Results of the Phase 3 Trial of Voretigene Neparvovec-rzyl in Biallelic RPE65 Mutation-Associated Inherited Retinal Disease. Jean Bennett^{1,2}, Stephen R. Russell³, Katherine A. High⁴, Arlene V. Drack³, Zi-Fan Yu⁵, Daniel C. Chung⁶, Kathy Reape⁴, Albert M. Maguire^{1,2}
Poster Session: Metabolism and Protein Processing: Retina, Photoreceptors and RPE	
	Differential requirement of NPHP1 for compartmentalized protein localization during photoreceptor outer segment development and maintenance. Seongjin Seo^{1,2}, Poppy Datta^{1,2}, J T. Cribbs^{1,2}
Tuesday, May 4	
9:15 AM – 11:00 AM	
Poster Session: Corneal Endothelium	
	Examining the relationship between injector lumen diameter and exposed endothelial surface area and tissue conformation of DMEK tissue scrolls. Yong Kam², Gregory Schmidt¹, Mark A. Greiner^{2,1}, Jennifer Ling^{2,1}, Christopher Sales^{2,1}
1:15 PM – 2:45 PM	

Paper Session: Gene Therapy in Ocular Diseases	
	Development and biological characterization of a clinical gene transfer vector for the treatment of MAK-associated retinitis pigmentosa. Budd A. Tucker¹ , Erin R. Burnight ¹ , Cathryn M. Cranston ¹ , Jessica L. Fick ¹ , Austin J. Reutzel ¹ , Melette R. Devore ¹ , Trudi Westfall ² , C. Anthony Scott ² , Autumn Marsden ² , Katherine N. Gibson-Corley ³ , Luke A. Wiley¹ , Ian Han ¹ , Diane Slusarski ² , Robert F. Mullins¹ , Edwin M. Stone ¹
1:15 PM – 4:00 PM	
Poster Session: AMD and Retinal Disease Epidemiology	
	BBS10 knockout mouse exhibits developmental lack of cone function and recapitulates retinal degeneration. Sara Mayer^{1,2} , Jacintha Thomas ^{1,2} , Angela Mahoney ^{1,2} , Sajag Bhattarai ^{1,2} , Qihong Zhang ^{1,2} , Elliot Stalter ^{1,2} , Poppy Datta ^{1,2} , Ying Hsu ^{1,2} , Janelle Garrison ^{1,2} , Charles Searby ^{1,2} , Seongjin Seo ^{1,2} , Val Sheffield ^{1,2} , Arlene V. Drack ^{1,2}
Wednesday, May 5	
4:00 PM – 5:30 PM	
Special Interest Group	Is the Current Staging System for Diabetic Retinal Disease still relevant in 2021? Michael Abramoff, MD, PhD
Special Interest Group	Deciphering the molecular landscape of retinal regeneration and degeneration using single cell genomics. Robert Mullins, MS, PhD
Thursday, May 6	
3:10 PM – 3:25 PM	
Minisymposium	Central neuropathic contributors to ocular surface pain. Randy Kardon, MD, PhD
3:12 PM – 3:26 PM	
Minisymposium	Transcriptomic heterogeneity of choroidal cells in aging and disease. Robert Mullins, MS, PhD
4:15 PM – 5:45 PM	
Paper Session: Genetics of Retinal Dystrophies	
	Mutational burden of mt3243G in blood correlates with the age of onset of retinal symptoms. Nathaniel K. Mullin¹ , Kristin R. Anfinson ¹ , Louisa M. Affatigato ¹ , Jeaneen L. Andorf ¹ , Megan J. Riker ¹ , Robert F. Mullins¹ , Edwin M. Stone ¹ , Budd A. Tucker¹
Paper Session: Stem Cells/Gene Therapy/Transplantation	
	Safety and efficacy of seprofarsen in the second treated eye in a Ph1b/2 extension trial in Leber Congenital Amaurosis type 10 (LCA10). Stephen R. Russell¹ , Arlene V. Drack ¹ , Artur V. Cideciyan ^{2,3} , Samuel G. Jacobson ^{2,3} , Bart Leroy ^{4,5} , Allen Ho ⁶ , Caroline Van Cauwenbergh ⁴ , Arun k. Krishnan ^{2,3} , Wilhelmina R. den Hollender ⁷ , Adriana Hollestein-Havelaar ⁷ , Mike Schwartz ⁷ , Aniz Girach ⁷
Friday, May 7	
1:15 PM – 4:45 PM	
Paper Session: Applications of Single-Cell RNA-SEQ and Transcriptome Studies to Retinal Cell Biology	
	Single-cell RNA sequencing identifies unique gene expression patterns in the foveal and perifoveal human retina. Andrew P. Voigt¹ , Nathaniel K. Mullin ¹ , S S. Whitmore ¹ , Todd E. Scheetz ¹ , Edwin M. Stone ¹ , Budd A. Tucker¹ , Robert F. Mullins¹